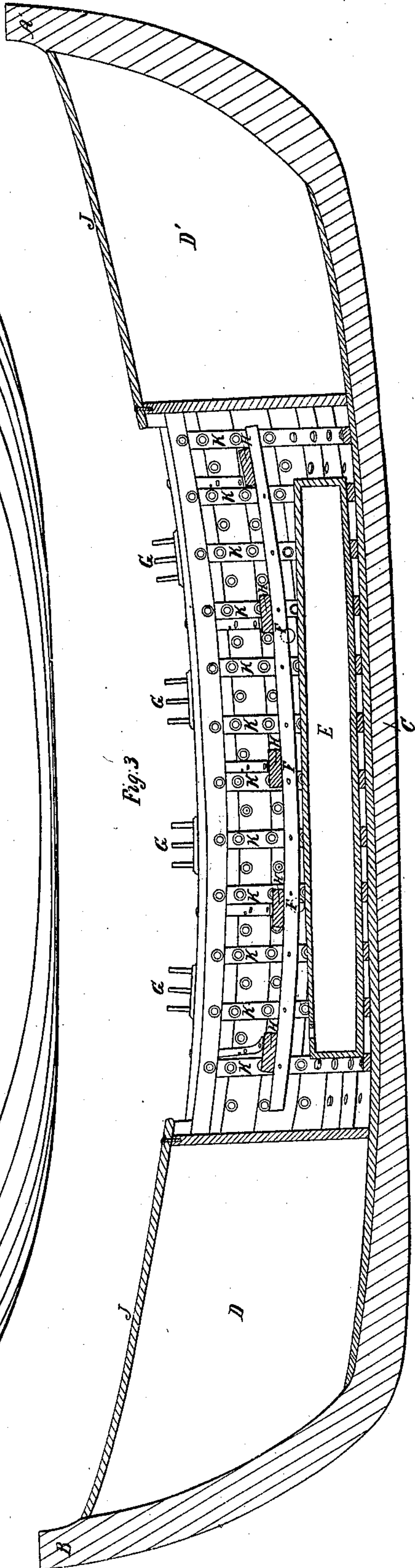
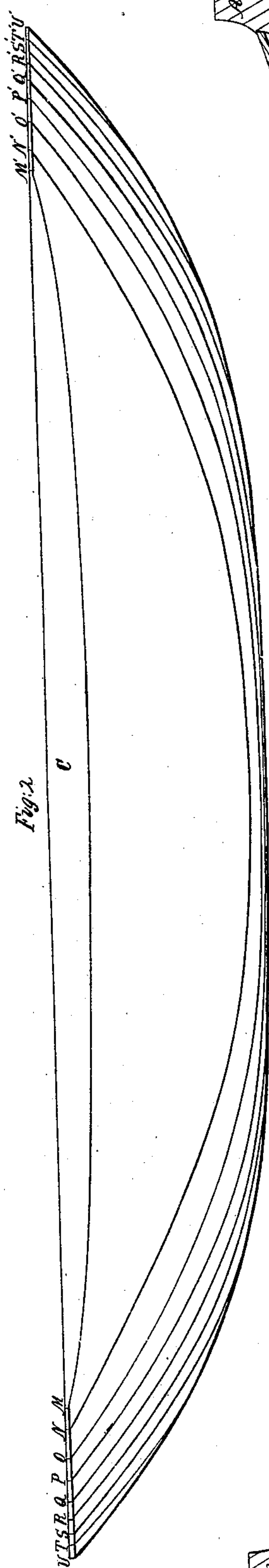
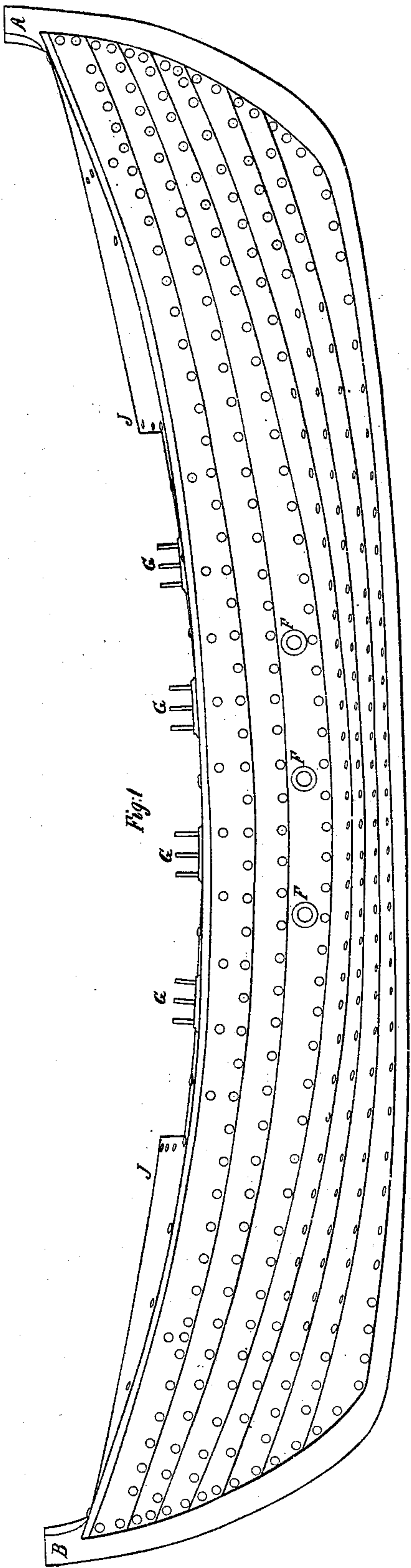


*R.C. Holmes's
Life Boat.*

N^o 18,095.

Patented Sept 1, 1857.



UNITED STATES PATENT OFFICE.

RICHARD C. HOLMES, OF CAPE MAY, NEW JERSEY.

SURF AND LIFE BOAT.

Specification of Letters Patent No. 18,095, dated September 1, 1857.

To all whom it may concern:

Be it known that I, RICHARD COLLINS HOLMES, of Cape May Court-House, in the county of Cape May and State of New Jersey, have invented an Improved Surf and Life Boat; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings, in which—

10 Figure 1, is a side view of my improved boat; Fig. 2, is a bottom view showing her lines; and Fig. 3, is a vertical, longitudinal section showing the internal arrangement and construction.

15 The nature of my invention consists in giving to a boat built of the lightest materials compatible with strength the peculiar form hereinafter described, and in the employment, in a boat of such peculiar form, 20 of self acting freeing valves, a water ballast tank, and buoyant end chambers, the latter possessing such an amount of buoyant power as, when the boat is bottom upward, to place the center of gravity in an unstable position, 25 so that it is free to descend, and in doing so must "right" the boat.

The peculiarity of form consists, as will be clearly seen by inspection of the drawings, in her lines being the same fore and 30 aft, and in the unusual amount of sheer and camber.

The drawings are made on the scale of a twelfth, and the lines of the boat are correctly laid down according to that scale so 35 that a practical man might build a boat from them.

In the drawings, the same part is indicated by the same letter in all the figures.

40 A marks the bow; B, the stern; C, the bottom; D, D', the buoyant chambers; E, the water tank; F, F, F', the bailing or freeing valves; G, G, G, &c., the thole pins; H, H, H, &c., the thwarts or seats; J, J, 45 deck of chambers; K, K, K, &c., the timbers or ribs; M, M', N, N', O, O', P, P', Q, Q', R, R', S, S', T, T', U, U', represent the lines of the boat, which are vertically six inches from one another.

50 The great sheer and camber of this boat are given to her not only to make her self-righting, but to make her dry and easy in a sea, and enable her to be turned readily both in the water and on the strand. She should be built upon a plank about one foot 55 wide in the middle, in order to diminish her draft, and facilitate handling on the beach.

Her timbers K K K, &c., should be young white oak splits, sprung into her from gunwale to gunwale and her planking of cedar or other similar wood in order to give her 60 lightness and elasticity. The thole pins, as seen in the drawings, are put in double, *i. e.* three pins to a rowlock, and I also give her one more thwart than there are rowlocks. Her lines being the same at both ends, she 65 can be rowed either end foremost with equal ease, and by shifting the steering oar, and the other oars, she can be managed without winding or turning. A becket for the steering oar should be placed at either end. The 70 double sets of thole pins, G, divide the distance equally between the thwarts, and secure a proper position of the oars whichever end may be rowed foremost. They also afford a spare lock for the oar in case a thole 75 pin should be broken.

In the boat I place a water tank E oblong in form, and secured firmly to the bottom in the position shown. An arrangement may be made, if desired, for filling the tank 80 for ballast through the bottom of the boat by means of a tube with a stop cock, and a spigot, or vent, in the top of the tank; but I prefer keeping the tank constantly full of fresh water, for the double purpose of bal- 85 lasting the boat, and affording drinking water to the crew in case of need.

In the sides of the boat, I place any required number of self-acting freeing or bail- 90 ing valves, opening outboard, for the purpose of enabling the boat to free herself of water. The line at which these valves are placed is that to which the boat will settle with the plug out, and her crew on board. The buoyant end chambers, I fill with cork 95 shavings, in preference to air, as being less liable to accidental injury. I prefer to make these chambers separate from the boat and so as to be shoved under the decks J J, and removable at pleasure when they or the boat 100 need repairs.

To the gunwales of the boat, I fasten long lines having balls of wood attached to their ends, in order to give the men a ready means of reaching the boat in case of their being 105 thrown out by her capsizing.

The form of this boat would be likely to prevent her from upsetting, but, in case such an accident should occur, she would rest upon her buoyant ends, her center of gravity 110 being high above a line drawn between them, and free to fall to either side upon the

slightest disturbance of its equilibrium. It could not remain balanced in that position for an instant in a rough sea, and the moment it lost it, the weight of the water tank
5 would coöperate with that of the boat to bring her right side up. The water with which she filled in turning would then run out through the valves F, F, F, until she was sufficiently free for her crew to get in
10 and bail out the remainder.

Having thus described my invention, I wish it to be understood that I do not claim, separately, the buoyant chambers, the valves, or the water tank, but

What I do claim is—

Constructing a boat of the peculiar form
hereinbefore described and represented, and giving to a boat of that form, buoyant ends, a ballasting tank and freeing valves, all constructed and operating substantially as de- 20
scribed, and for the purposes specified.

The above specification signed and witnessed this fifteenth day of August 1857.

RICHARD C. HOLMES.

Witnesses:

WILLIAM ELDRIDGE,
JONATHAN HAND.